



UNITED STATES PATENT AND TRADEMARK OFFICE

cel

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,563	03/23/2001	Shunpei Yamazaki	SEL 248	9704

7590 06/21/2005

COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD.
SUITE 2850
220 WEST ADAMS STREET
CHICAGO, IL 60606

EXAMINER

MACCHIAROLO, PETER J

ART UNIT	PAPER NUMBER
----------	--------------

2879

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,563

Applicant(s)

YAMAZAKI ET AL.

Examiner

Peter J. Macchiarolo

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 13-16, 18 and 30-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 13-16, 18 and 30-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The reply filed on 04/20/2005 consists of changes to claims and remarks related to the prior rejection of claims in the previous Office Action. The above have been entered and considered. However, pending claims 1-4, 6, 13-16, 18, and 30-58 are not allowable as explained below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-4, 6, 13-16, 18, 30-33, and 49-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely (USPN 5400047; "Beesely") in view of Terao et al (USPN 6133581; "Terao").**

3. Regarding claim 1, Beesely shows in figure 4, a light emitting apparatus having at least one light emitting element over an insulator (52), the light emitting element comprising: a first electrode (64) having at least a first edge and a second edge formed over said insulator; at least one wiring (66) formed in contact with the first edge of the first electrode, and wherein the wiring is not part of the first electrode; an insulating film (56) covering at least the first and the second edges of the first electrode; a second electrode (62) formed over said insulating film; and

Art Unit: 2879

a luminescent material (58) interposed between said anode and said second electrode, and between said second electrode and said insulating film.

4. Beesely is silent to the first and second electrodes being anodes and cathodes, respectively, and the wiring being interposed between the insulator and the anode.

5. However, both the first and second electrode will be an anode and cathode, respectively, when the first electrode is supplied with positive current, and the second electrode is supplied with negative current.

6. Furthermore, Terao shows in figures 8c that a light emitting apparatus having a wiring (2b) on the edge of an anode in a configuration similar to Beesely, can also be positioned between the insulator (fig. 8e, #1) and anode (2a), and is a matter of design choice which will allow for different manufacturing methods which can meet different manufacturing requirements.

7. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting apparatus of Beesely with the wiring configuration of Terao to allow for a more modular device which can be manufactured differently to accommodate specific manufacturing equipment.

8. Regarding claims 2 and 3, Beesely discloses the wiring is formed of a metal film of aluminum (fig. 7, #74).

9. Regarding claim 4, Beesely discloses the first electrode is formed of electrically conductive oxide film (ITO).

Art Unit: 2879

10. Regarding claim 6, Beesely shows in figure 12 an electric device (waveform generator) using an apparatus of claim 1.

11. Regarding claim 30, Beesely shows the wiring is different in material from the anode.

12. Regarding claim 31, Beesely shows the wiring is made of a material lower in resistance than that of the anode.

13. Regarding claims 13, 49, and 55, Beesely shows in figure 4, a light emitting apparatus having at least one light emitting element over an insulator (52), the light emitting element comprising: an first electrode (64, discussed above as an anode) having at least a first edge and a second edge formed over said insulator, the anode extending in a first direction wherein each of the first edge and the second edge of the anode extends along the first direction, a first and second wiring (66) formed in contact with the first and second edges of the anode respectively, and extending in the first direction, and the first wiring and the second wiring are not part of the anode; an insulating film (56) covering at least the first and the second edges of the anode; a second electrode (62, discussed above as a cathode) formed over said insulating film; and a luminescent material (58) interposed between said anode and said cathode, and between said cathode and said insulating film.

14. Beesely is silent to the first and second electrodes being anodes and cathodes, respectively, and the wiring being interposed between the insulator and the anode.

Art Unit: 2879

15. However, as discussed above, the first and second electrodes will be anodes and cathodes.

16. Furthermore, as discussed above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting apparatus of Beesely with the wiring configuration of Terao to allow for a more modular device which can be manufactured differently to accommodate specific manufacturing equipment.

17. Regarding claims 14-16, 18, 50-52, the limitations therein have been discussed at numbered paragraphs 8-10.

18. Regarding claims 32, 33, 53, 54, the limitations therein have been discussed at numbered paragraphs 11-12.

19. **Claims 34-37 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki et al (USPN 6570321; "Kusunoki").**

20. Regarding claim 34, the limitations therein have been discussed at numbered paragraphs 13-16, but Beesely and Terao are silent to a first driver circuit connected to the anode and a second driver circuit connected to the cathode, and the method of mounting the circuits.

21. However, Kusunoki shows that a first and second driver will are needed in a light emitting apparatus of Beesely and Terao, and mounting the drivers by a COG system is a known method of mounting the drivers. One would be motivated to these modifications to allow for proper operation of the device.

Art Unit: 2879

22. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely and Terao with a first driver circuit connected to the anode and a second driver circuit connected to the cathode, and mounting the drivers with a COG system to allow for proper operation of the device.

23. Regarding claims 35-37, the limitations therein have been previously discussed at numbered paragraphs 8-10.

24. Regarding claim 56, the limitations therein have been previously discussed at numbered paragraph 13.

25. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki, in further view of Codama et al (USPN 6037712; "Codama").

26. Regarding claim 38, Beesely, Terao, and Kusunoki are silent to the light emitting apparatus having a plurality of banks arranged to be orthogonal to the anode.

27. However, Codama shows this configuration reduces manufacturing time and increases reliability of the device.

28. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely,

Art Unit: 2879

Terao, and Kusunoki with the banks of Codama to reduce manufacturing time and increase the device's reliability.

29. **Claims 39, 40-42, 44-47, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki, in further view of Yokoi et al (USPN 5962970; "Yokoi").**

30. Regarding claims 39 and 44, the limitations therein have been discussed at numbered paragraphs 13-16, but Beesely, Terao, and Kusunoki are silent to connecting the first and second stick drivers to an anisotropic electrically conductive material or a metal wire. However, it is noted that the inclusion of an anisotropic electrically conductive material or a metal wire is not shown to solve any problems or yield any unexpected results that are not within the scope of Beesely, Terao, and Kusunoki's display. Accordingly, this inclusion is considered to be an obvious matter of design choice. For example, Yokoi discloses that a stick driver can be connected to an electrode with an anisotropic electrically conductive material.

31. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely, Terao, and Kusunoki including connecting first and second stick drivers to the anode and cathode through anisotropic electrically conductive material or by a metal wire to allow for easy manufacturing and proper operation.

32. Regarding claims 40-42 and 45-47, the limitations therein have been previously discussed at numbered paragraphs 8-10.

Art Unit: 2879

33. Regarding claims 57 and 58, the limitations therein have been previously discussed at numbered paragraph 13.

34. **Claims 43 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beesely in view of Terao in further view of Kusunoki, in further view of Yokoi, in further view of Codama.**

35. Regarding claims 43 and 48, Beesely, Terao, Kusunoki, and Yokoi are silent to the light emitting apparatus having a plurality of banks arranged to be orthogonal to the anode.

36. However, Codama shows this configuration reduces manufacturing time and increases reliability of the device.

37. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Beesely, Terao, and Kusunoki with the banks of Codama to reduce manufacturing time and increase the device's reliability.

Response to Arguments

38. Applicant's arguments with respect to claim have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

39. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

40. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

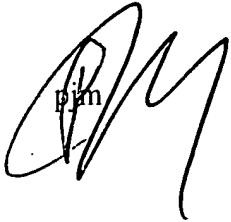
41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

42. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

43. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2879

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be "Joseph Williams", with a stylized "J" and "W".

Joseph Williams
JOSEPH WILLIAMS
PRIMARY EXAMINER